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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	09/670,610
Filing Date	09/26/2000
First Named Inventor	Jaeger
Art Unit	2676
Examiner Name	Nguyen
Total Number of Pages in This Submission	4143

ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation <input type="checkbox"/> Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below): Brief on Appeal PTO Reply Postcard
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Zimmerman & Cronen, LLP		
Signature			
Printed name	Harris Zimmerman		
Date	05/29/2007	Reg. No.	16,437

CERTIFICATE OF TRANSMISSION/MAILING

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Signature			
Typed or printed name	Harris Zimmerman	Date	05/29/2007

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Effective on 12/08/2004.

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL For FY 2007

 Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	(\\$) 250
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Complete if Known

Application Number	09/670,610
Filing Date	09/26/2000
First Named Inventor	Jaeger
Examiner Name	Nguyen
Art Unit	2676
Attorney Docket No.	4143

METHOD OF PAYMENT (check all that apply)

Check Credit Card Money Order None Other (please identify): _____

Deposit Account Deposit Account Number: 26-0265 Deposit Account Name: Harris Zimmerman

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

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FEE CALCULATION**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

<u>Application Type</u>	<u>FILING FEES</u>		<u>SEARCH FEES</u>		<u>EXAMINATION FEES</u>		<u>Fees Paid (\$)</u>
	<u>Fee (\$)</u>	<u>Small Entity Fee (\$)</u>	<u>Fee (\$)</u>	<u>Small Entity Fee (\$)</u>	<u>Fee (\$)</u>	<u>Small Entity Fee (\$)</u>	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEESFee Description

Each claim over 20 (including Reissues)

Each independent claim over 3 (including Reissues)

Multiple dependent claims

<u>Total Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>	<u>Small Entity</u>	<u>Fee (\$)</u>	<u>Fee (\$)</u>
				<u>Fee (\$)</u>	<u>Fee (\$)</u>	<u>Fee (\$)</u>

- 20 or HP = _____ x _____ = _____

HP = highest number of total claims paid for, if greater than 20.

<u>Indep. Claims</u>	<u>Extra Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>	<u>Multiple Dependent Claims</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>
				<u>Fee (\$)</u>	<u>Fee (\$)</u>	<u>Fee (\$)</u>

- 3 or HP = _____ x _____ = _____

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

<u>Total Sheets</u>	<u>Extra Sheets</u>	<u>Number of each additional 50 or fraction thereof</u>	<u>Fee (\$)</u>	<u>Fee Paid (\$)</u>
- 100 = _____ / 50 = _____ (round up to a whole number) x _____ = _____				

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Brief in Support of Appeal 250.00

SUBMITTED BY

Signature		Registration No. (Attorney/Agent) 16,437	Telephone 510-465-0828
Name (Print/Type)	Harris Zimmerman		Date 05/29/2007

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BRIEF ON APPEAL

A. IDENTIFICATION PAGE

Applicant's name: JAEGER

Application Serial No. : 09/670,610

Filed: 09/26/2000

Title: TOUCH SENSOR CONTROL DEVICES

Examiner: Nguyen

Group Art Unit: 2676

05/31/2007 CNEGA1 00000020 09670610
01 FC:2402 250.00 OP

B. TABLE OF CONTENTS

Identification page	1
Table of Contents.....	2
Real Party in Interest	3
Related Appeals and Interferences	4
Status of Claims	5
Status of Amendments	6
Summary of Claimed Subject Matter	7
Grounds of Rejection to be Reviewed	9
Argument	10
Claims Appendix	14
Evidence Appendix	21
Related Proceedings Appendix	29

C. REAL PARTY IN INTEREST

This patent application has been assigned to Intertact Corp, and the successor party in interest, NBOR Corp, which is the real party in interest.

D. RELATED APPEALS AND INTERFERENCES

There are no related appeals nor interferences that are related to, or have any bearing on, the present application.

E. STATUS OF CLAIMS

Claim 97 stands rejected.

Claims 94, 95, 99, 102-104, and 108-111 stand allowed.

No new claims have been entered. Claim 97 is the subject of this appeal.

F. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the final rejection of January 3, 2007.

G. SUMMARY OF CLAIMED SUBJECT MATTER

The subject matter of the invention comprises a broad concept of mechanical devices to enhance the input process for touch screen devices. Various embodiments of the broad concept include a fader track, a knob controller, a switch mechanism, joystick embodiments, and the like, all designed so that they may be removably adhered to the touch screen surface. One particular embodiment of the invention is the “crack-and-peel” packaging of the mechanical input devices, in which a plurality of the mechanical input devices are secured to a common scrim that is scored at defined separating lines. The scrim includes a self-adhering base sheet that is protected by a bottom release layer. A user may separate one device from the group by bending the scrim at the score line so that it may be easily separated from the scrim. The base layer is then peeled away and the device is self-adhered to the touch screen.

The crack-and-peel feature is clearly defined in the present application, on page 41, line 16 to page 42, line 3:

With regard to Figure 35, the controller devices of the invention may be provided as a group of devices 220, here representing any of the controller devices described herein (all the same or a variety selection of knobs and faders, etc.) The devices 220 are secured to a common scrim 221 that is scored at separating lines 222. The scrim 221 may incorporate the self-adhering base component of the respective knob, fader track, joystick, or the like. The user may separate a device from the group along a scored line 222, and peel away a bottom release layer 223 to expose the adhesive. The separated device may then be applied directly to a touch screen device and used as described herein. This is termed crack-and-peel packaging. Each device may be removed from a touch screen and reused many times, and ultimately discarded.

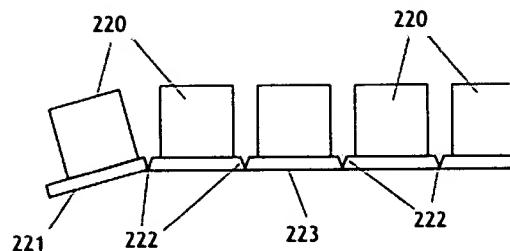


FIG. 35

The crack-and-peel feature is the subject of claim 97, the only claim on appeal in this proceeding.

H. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

There is one ground of rejection to be reviewed on appeal:

- 1) whether claim 97 is unpatentable under 35 USC 103 over the Selig and Varveris patents.

I. ARGUMENT

Rejection of claim 97 under 35 USC 103(a) Selig in view of Varvaris

Claim 97 stands rejected as unpatentable under 35 USC 103(a) over the Selig and Varveris patents.

The Selig reference describes a keypad that has movable keys for inputting alphanumeric data into a touch screen. The keypad 14 incorporates a plurality of articulated or flexible keys 24 that are arrayed to operatively engage the touchscreen upon depression of the keys by the user. Thus, it may be said that Selig teaches a structure that incorporates a plurality of mechanical touch input devices.

Selig also states that the exemplary embodiment may be formed as a unitary member using a suitable elastic or resilient material such as silicon rubber which may be readily molded into shape. (Col. 5, lines 62-65). Here, as elsewhere in the Selig disclosure, the device is described as a unitary array of keys that are flexible enough to be depressed into contact with the touchscreen. There is no mention nor implication that any of the keys could be broken away or otherwise separated from the unitary member. The devices cannot be broken away from the keypad in dispensing fashion, as in the claimed invention.

Selig never suggests any intent or structural feature that would support a crack-and-peel assembly of the mechanical touch input devices. Selig provides a plurality of touch input devices that are unitary and NOT separable, as required for a crack-and-peel function. The molded silicon rubber is a flexible base/frame, and it is not adapted for crack-and-peel separation. There is a complete absence of the score lines that are necessary to define the separation boundaries between the devices. Thus Selig teaches away from the concept of crack-and-peel by providing a structure that is not conducive to crack-and-peel uses.

Further, it should be noted that the crack-and-peel arrangement as defined in the present application includes a scrim that extends to the self-adhering base components of the plurality of touch input devices, so that they may be separated therefrom along the score lines.

Also, Selig does not teach the concept of touch input devices that are self-adhesive to the touchscreen. Rather, Selig's keypad is supported in a retainer frame 30 that is removably secured to the bezel that surrounds the touch screen. This mounting arrangement is entirely different from the claimed invention, and these differences are significant. For example, the Selig keypad requires that the keypad have a retainer frame, and that the screen has a bezel, and that the retainer frame interacts with the bezel to mount the keypad in its operating position proximate to the screen. In contrast, the claimed invention eliminates the need for a retainer frame, eliminate the need for a bezel surrounding the screen, and eliminates the need for the retainer frame to cooperatively engage the bezel. The claimed invention can be adhered to any touch screen without regard to its bezel design, etc., and is thus more widely applicable than the arrangement of the Selig reference. Moreover, the Selig retainer/bezel assembly impliedly relies on a corner mounting arrangement, since that would engage two sides of the keypad for support. This factor renders the Selig assembly not suitable for mounting in the middle of the screen, where side support is unavailable. Thus Selig is further limited in its useful mounting range, a limitation that the claimed invention overcomes.

The secondary reference, Varveris, is cited for an alleged showing of the crack-and-peel feature of claim 97 that is clearly lacking in the Selig reference. Varveris discloses a finger-mounted stylus for interacting with a touch screen. The stylus rod 12 is secured to the top side of a human finger by a strap 11 that is held about the fingertip 25 by Velcro pads, magnetic pads, elastic loops, or the like. The strap is provided with a

pair of openings that enable the stylus rod to extend therethrough and be supported in a semi-friction fit on the finger portion.

Applicant is frankly baffled at the citation of Varveris for a showing of a crack-and-peel concept. There is absolutely no mention of the term “crack-and-peel” in Varveris, nor is there any suggestion of this concept. Varveris discloses a solitary touch input device, and there is no teaching of the notion that a plurality of such devices could be assembled in a crack-and-peel sheet. There is no common scrim that could support a plurality of the devices. It is a fact that the Varveris disclosure is utterly and completely devoid of any teaching or mention or suggestion of the crack-and-peel feature of the claimed invention.

The term “crack-and-peel sheet” as used in claim 97 is a term of the art, particularly in the paper arts, and it refers to labels or stickers that are typically sheetfed printed to form sheets of labels or stickers, or roll printed and rewound onto cores to form rolls of labels or stickers. The printed product includes score lines that define the useful parts of the printed product, and the user may bend (“crack”) the sheet or roll on the score line to expose the edge of the useful parts, which are then easily peeled from the carrier portion of the printed product. Crack-and-peel labels are generally meant to be used one at a time and hand applied. See, for example, *Sticky Stuff*, by Terry Lee Stone; Dynamic Graphics magazine, August/September 2006.

It is acknowledged that the term “crack-and-peel” is used typically in the paper and printing arts. This fact underscores an important innovation in the present invention: the application of the mass-production, mass-marketing techniques of crack-and-peel printing to the new technology of touch screen input devices. Touch screen input devices are generally considered to be high cost computer peripheral input devices, not cheap devices sold in sheets or rolls of 10 or 20, and designed to be used once or a few times, and easily replaced. There is no suggestion of applying this technology from a rather

distant printing art to the realm of touch screen input devices. This is an innovative concept that is introduced in the present invention and is deserving of patent protection.

Furthermore, the term “crack-and-peel” also has been clearly defined in the present application, by illustration in Figure 35 and in the related description excerpted above (Brief, page 7). It requires a plurality of touch input devices, a self-adhesive base component (covered by a release layer) to secure the devices to a touch screen, a common scrim that joins the devices, and score lines to enable separation of each device from the sheet.

To compare the reference with applicant’s own definition of crack-and-peel, Varveris describes a single device, NOT a plurality of touch input devices, that is NOT mounted on a scrim, does NOT have an adhesive base, does NOT have score lines to separate a device from the plurality (there is no plurality) of devices, does NOT have a bottom release layer, and CANNOT be mounted on a touch screen. Clearly Varveris has no teaching of the crack-and-peel limitation of claim 97.

Applicant poses the question: If a person having ordinary skill in the art were to combine the teachings of Selig and Varveris, would the combination equal the terms of claim 97? The answer clearly is negative. Selig admittedly has no suggestion of the crack-and-peel feature, but the secondary reference cited to fill this deficit is found to be completely lacking in the crucial teaching, since Varveris has absolutely no disclosure or hint of a crack-and-peel arrangement.

The Final Rejection (p. 3, lines 16-20) states that “Varveris teaches an input device, which can be contained in a touch screen (see col. 2, lines 54-62) (thus can include a bottom release layer, and *capably mounted on a touch screen*), having a base member (“strap” portion), which can be made entirely of plastic “Velcro” material, or of rubber, leather, or fabric with Velcro material or other separable fastener at the ends (crack and peel sheet).” This ground of rejection takes out of context a quote from the

reference which is then misinterpreted to indicate that the finger stylus can be melded with a touch screen. In fact, the cited reference section states (Varveris, col. 2, lines 54-62), “The non-marking finger stylus can be rolled, unrolled, flattened or folded to a very small size so that it can be easily carried, or attached to or contained in touch screen devices, for example, by attaching the stylus fastening part to a complementary portion of Velcro material affixed to an edge of the computer screen or case. ...” The reference is clearly speaking of storing and transporting the finger stylus with a touch screen device by sticking the stylus device to an edge of the touch screen assembly. Recalling that the finger stylus must be mounted on the finger in order to be used as a touch screen input device, it is clearly an inappropriate interpretation of the reference to imagine that the Varveris finger stylus could be somehow be mounted on a touch screen in an operable manner. It is an even more egregious flight of fancy to leap from that misinterpretation to make up a base member on which to mount the finger stylus to the touch screen.

Applicant asserts that the combination of references fails very clearly to make obvious the elements of the claim on appeal. Therefore it is respectfully requested that the Final Rejection of claim 97 be reversed, and claim 97 be allowed with the remaining claims.

J. CLAIMS APPENDIX

Claims 1-93 (cancelled).

Claim 94. (allowed) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen; means associated with said base member for provoking a touch detection by the touch screen;

said base member including a longitudinally extending rib having a bottom surface adapted to impinge on the touch screen;

further including a fader cap, and means for securing said fader cap to said rib in longitudinally sliding fashion;

a stylus tip extending from said cap toward said touch screen;

wherein the touch screen is adapted to detect the position of a touch signal applied thereto, said fader cap including means for generating said touch signal and transmitting said touch signal through said stylus tip to said touch screen;

power supply means in said fader cap for driving said touch signal generating means, said power supply means including a battery.

Claim 95. (allowed) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen; means associated with said base member for provoking a touch detection by the touch screen;

said base member including a longitudinally extending rib having a bottom surface adapted to impinge on the touch screen;

further including a fader cap, and means for securing said fader cap to said rib in longitudinally sliding fashion;

a stylus tip extending from said cap toward said touch screen;

wherein the touch screen is adapted to detect the position of a touch signal applied thereto, said fader cap including means for generating said touch signal and transmitting said touch signal through said stylus tip to said touch screen;

power supply means in said fader cap for driving said touch signal generating means, said power supply means including a photovoltaic cell.

Claim 96 (canceled).

Claim 97. (allowed) A system for providing input to a generally flat touch screen, including:

a plurality of devices for interacting with the touch screen, each device including a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

wherein said plurality of said devices are joined in a crack-and-peel sheet.

Claim 98 (canceled).

Claim 99. (allowed) A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

said base member comprising a post having a bottom surface adapted to impinge on the touch screen;

 further including a knob cap secured coaxially to said post and adapted for rotation about a common axis;

 a stylus tip extending from said knob cap toward said touch screen;

 said touch screen being adapted to detect the position of a touch signal applied thereto, said knob cap including means for generating said touch signal and transmitting said touch signal through said stylus tip to said touch screen;

 power supply means in said knob cap for driving said touch signal generating means, said power supply means including a photovoltaic cell.

Claim 100 –101 (canceled)

Claim 102 (allowed) A device for providing input to a generally flat touch screen, including:

 a base member and means for securing said base member to the touch screen; means associated with said base member for provoking a touch detection by the touch screen;

 said base member comprising a post having a bottom surface adapted to impinge on the touch screen;

 further including a computer having a graphic display associated with the touch screen, and software means for receiving touch input provoked by said post with fingertip pressure, said software means including means for analyzing touch inputs provoked by said post with fingertip pressure and emulating specific diverse controller characteristics in response to said touch inputs;

said software means including means for analyzing initial touch inputs provoked by said post with fingertip pressure and determining the center point of said initial touch inputs,

said software means providing a joystick controller emulation and interpreting a linear touch pattern at any angle from said center point as a command to move a graphic at the same angle on the display, wherein the rate of movement of the graphic is set by said software means.

Claim 103. (allowed) A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen; means associated with said base member for provoking a touch detection by the touch screen;

said base member comprising a post having a bottom surface adapted to impinge on the touch screen;

further including a computer having a graphic display associated with the touch screen, and software means for receiving touch input provoked by said post with fingertip pressure, said software means including means for analyzing touch inputs provoked by said post with fingertip pressure and emulating specific diverse controller characteristics in response to said touch inputs;

said software means including means for analyzing initial touch inputs provoked by said post with fingertip pressure and determining the center point of said initial touch inputs;

said software means providing a joystick controller emulation and interpreting a linear touch pattern at any angle from said center point as a command to move a graphic at the same angle on the display, wherein the rate of movement of the graphic is

proportional to the amount of time that a touch detection is maintained at any given angle.

Claim 104. (allowed) A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen; means associated with said base member for provoking a touch detection by the touch screen;

said base member comprising a post having a bottom surface adapted to impinge on the touch screen;

further including a computer having a graphic display associated with the touch screen, and software means for receiving touch input provoked by said post with fingertip pressure, said software means including means for analyzing touch inputs provoked by said post with fingertip pressure and emulating specific diverse controller characteristics in response to said touch inputs;

said software means including means for analyzing initial touch inputs provoked by said post with fingertip pressure and determining the center point of said initial touch inputs;

said software means providing a mouse controller emulation and interpreting a touch detection displaced from said center point at an angle thereabout as a command to move a cursor at the same angle on the display.

Claim 105-107 (canceled).

Claim 108 (allowed) A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;
means associated with said base member for provoking a touch detection by the
touch screen;

said base member defining a bottom opening, a control rod having a lower end
with a stylus tip, and means for supporting said control rod on said base member with
said stylus tip spaced closely to the touch screen to provoke a touch detection;

said means for supporting said control rod including a universal bearing engaging
a medial portion of said control rod; and,

a membrane extending radially from said control rod to said base member, said
membrane formed of an elastic, resilient web.

Claim 109 (allowed) A device for providing input to a generally flat touch
screen having a peripheral edge, including:

a flexible track mounted at the peripheral edge of the touch screen, said flexible
track being extendable along an axis extending inwardly on said screen; means
extending from said flexible track for provoking a touch detection by said touch screen;
and,

means for detecting extension and retraction of said flexible track with respect to
the peripheral edge of the touch screen and correlating the extension and retraction with a
controller function;

wherein said means for detecting includes a spindle about which said flexible
track is passed, and means for sensing rotation of said spindle and converting said
rotational data into location coordinates of said cap end of said flexible track;

said spindle including radial teeth, and said flexible track includes a toothed
surface adapted to engage said radial teeth.

Claim 110 (allowed) A device for providing input to a generally flat touch screen having a peripheral edge, including:

a flexible track mounted at the peripheral edge of the touch screen, said flexible track being extendable along an axis extending inwardly on said screen; means extending from said flexible track for provoking a touch detection by said touch screen; and,

means for detecting extension and retraction of said flexible track with respect to the peripheral edge of the touch screen and correlating the extension and retraction with a controller function;

wherein said means for detecting includes a spindle about which said flexible track is passed, and means for sensing rotation of said spindle and converting said rotational data into location coordinates of said cap end of said flexible track;

further including motor means for driving said spindle to extend and retract said flexible track with respect to the peripheral edge of the touch screen.

Claim 111 (allowed) A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen; means associated with said base member for provoking a touch detection by the touch screen;

said base member including a longitudinally extending rib having a bottom surface adapted to impinge on the touch screen;

further including a fader cap, and means for securing said fader cap to said rib in longitudinally sliding fashion;

a stylus tip extending from said cap toward said touch screen;

wherein the touch screen is adapted to detect the position of a touch signal applied thereto, said fader cap including means for generating said touch signal and transmitting said touch signal through said stylus tip to said touch screen;
further including power supply means in said fader cap for driving said touch signal generating means, said power supply means including a battery;
said fader cap including touch switch means for connecting said battery to said touch signal generator means in response to fingertip touch on said fader cap.

Claim 112 (canceled).

K. Evidence Appendix

Sticky Stuff, by Terry Lee Stone; Dynamic Graphics magazine, August/September 2006

(Off-print from website: <http://www.dynamicgraphics.com/dgm/Article/28682>) 6 pages.
Dynamic Graphics magazine, August/September 2006
<http://www.dynamicgraphics.com/dgm/Article/28682>

Sticky Stuff

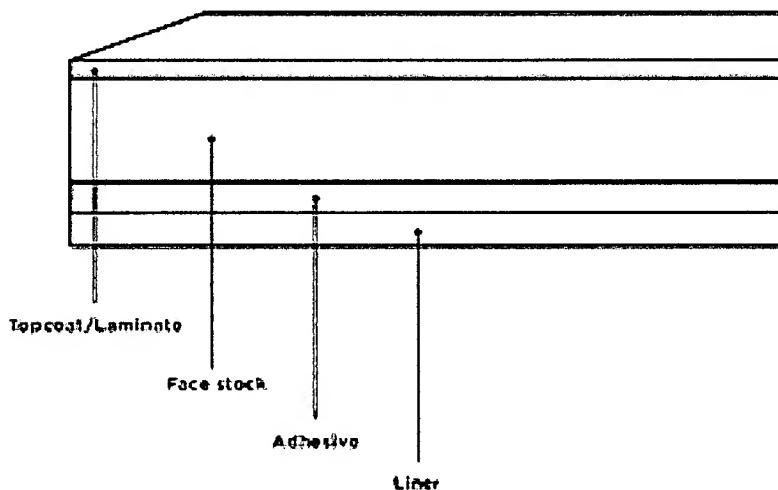
Labels and packages have a design mystique all their own. Here's what you'll need to know to take advantage of their graphic potential.

by Terry Lee Stone
August/September 2006

There are lots of ways to make your designs stick. Adhesive papers come in many varieties for different aesthetic looks and practical purposes. Choosing the right one for the job is a matter of creative preference filtered through technical specifications. With a particular usage in mind, designers need to review label stock materials, the processes of label manufacturing, and how they are applied in order to decide what meets their clients' needs.

Pressure-sensitive label (PSL) anatomy

Face stock can change a label's appearance from roughly textured to polished. Different types of adhesives can create everything from repositionable temporary labels for name badges to permanent labels that withstand high and low temperatures in food packaging. Begin by understanding the five components to every label:



1. Topcoat or laminate (this is optional)
2. Face stock
3. Adhesive
4. Backing or liner
5. Substrate (what the label is going to stick to)

All five components have characteristics that affect design. Let's look at these components in the context of the three types of labels used most often by designers—pressure-sensitive labels, mounted sheet labels, and static cling labels.

Pressure-sensitive labels

These self-adhesive labels are constructed with a face stock (the part that gets printed on). Over the face stock is the optional topcoat, or laminate, that acts as waterproofing. Under the face stock is the adhesive, followed by a nonstick liner that gets peeled off and discarded.

An example of this type of label, crack and peels, are pressure-sensitive label stocks that get sheetfed printed; they're either cut to size (e.g., mailing labels in stationery packages) or kiss-cut to stay on larger sheets until individual labels are peeled off when needed (think of those labels you run through your laser printer). Another variety of pressure sensitive paper label is roll labels. These are printed by flexography rather than sheetfed lithography.

In flexography, the label stock is printed on a curved (flexographic) press drum, then rewound on a cardboard core. They are most often used in packaging, although rolls of self-adhesive postage stamps are also offered on pressure-sensitive roll labels.

Paper is a versatile, economical, and easy-to-print face stock that can be die cut into any shape. Face stocks come in a variety of finishes, including the coated stocks: high-gloss cast coated, gloss, semigloss, and matte; and uncoated stocks that often match writing-weight papers. There are also specialty stocks such day-glo, metallic, and foil papers.

Very special

A label for an entertainment industry executive's holiday gift (above left) takes advantage of several decorative printing processes. This wine label, designed by Margo Chase and printed by Tobu Print Group, features engraving, embossing, and spot lamination on the surface of a crack and peel adhesive stock. It demonstrates that labels can be as creatively produced as other print design projects.

On a roll

These Kama Sutra labels (above right) were also created by Chase Design Group. Producing labels on rolls makes the application process of adhering the labels to product containers able to be automated, often saving money and time. The transparency of the bath gel label allows the product's color to be visible through the packaging.

Adhesives for pressure-sensitive labels can be formulated to be removable or permanent. Another important aspect of pressure-sensitive labels is that the roll label variety can be used with automatic applicators to adhere the labels to the substrate surface. This means faster application time and less cost than hand application. However, crack and peel labels are generally meant to be used one at a time and hand applied.

Pressure sensitive (PS) film labels are constructed and work the same way as paper ones, but the face stock is film. The film is transparent but can be made opaque by printing a background color with opaque inks. A wonderful thing about using a clear film label is that the color of the product can shine through the packaging, providing a no-label look.

Topcoating or laminating isn't necessary because film is already moisture resistant. However, inks need to be specially formulated for film face stock. One option is using UV inks that can provide a superior brilliance of color.

Film labels are good for applying to curved surfaces. They work especially well in packaging that is handled and squeezed because these labels flex and are durable. (A variation of PS film labels are full wraparound stretch sleeve ones that cover the package completely ... but these are not technically pressure-sensitive labels.)

Mounted sheet labels

Premium face stock can be used in conjunction with a glue machine to turn virtually any sheetfed lithographic paper into a label. Here's how it works: A sheet of paper is printed, often including specialty processes like engraving and foil stamping. The printed material is then topcoated—for example, varnished if there is a need to protect the graphics, provide a moisture barrier, or help the package resist abrasion. Once the sheet is dry, it's run through a machine that applies adhesive. The sheet is then adhered onto the substrate, which is often chipboard. Once the bond is fully dried, the laminated board is scored, die cut, then folded and glued to make a box.

The great advantage to using this process is that the surface printing quality of a premium paper is far superior to typical coated board stock. You end up with a stronger box and better looking printing. If a full-bleed flat color is printed on the coated side of the chipboard and laminated on the uncoated side, the resulting box can be very impressive indeed (see the Stila packages below).

Pretty sticky

These delightful little compact cosmetic packages, designed by Susie Mendive for Stila, hold eye shadows and blushes. The litho-printed paper labels mounted to board stock and diecut provides Stila with an interesting, costcontrolled seasonal launch option.

Using premium stocks, belly-band labels can be created when a strip of face stock is wrapped around a substrate, like a package or deck of postcards, and then glued to itself with adhesive applied on the label's overlapping edge. Belly bands are easy to break or slide off the piece, leaving the items they are wrapped around unaffected.

Static cling labels

Another use for labels—one that has nothing to do with packaging or stationery systems—is for temporary and display signage. Static cling labels are made of specially formulated self-adhesive vinyl film that sticks by static electricity to the substrate. As with a pressure-sensitive film label, the film is transparent but can appear opaque if printed that way. Topcoating isn't required, but special inks have to be used.

These labels can be easily repositioned, so they're great in environments where signs need to go up for a short period of time. For a more permanent or ofthandled sign, a designer should specify a different material ... but static cling labels are a great way to get a brand message into an environment.

Temporary messaging

The Vote mailer, designed by Larsen, utilizes several sticky items in one piece—six square black, white, and yellow static clings in a silver translucent envelope with a

metallic adhesivebacked mailing label, and a glued belly band. The advantage of static cling: It was easily removable once voting day was over.

Beyond these types, there are a variety of specialty labels created for very specific purposes. These include such things as premade label sheets that work in laser printers; barcode labels for inventory tracking and pricing; retail price stickers; clothing labels for branding and washing instruction; CD and DVD labels; as well as tamper-resistant, tamper-evident, and other security labels that help protect consumers. Typically, these labels are not created or specified by designers, but their application on a product can affect a design. In addition, there are also labels made of specialty materials like heat-sealed labels, aluminum, and magnetic material.

Adhesives, topcoats, and liners

An important consideration when specifying any label is what type of adhesive will be used. Adhesives are made from natural rubber, acrylic polymers, and silicone, each of which has different properties, applications, and costs. Adhesives can have either high or low tack— meaning very sticky with a high cohesive bonding strength, or lightly sticky with a low level of adhesion. This makes a difference in whether or not the labels will be permanent or removable.

Items like warning labels on hazardous materials need to be permanent ... while name badges for a conference need to be easily removed from clothing. Beyond these characteristics, adhesives can be formulated for hot or cold temperatures, or to resist grease and oil, and even be usable with food products.

Topcoating a label can be done for aesthetic or practical reasons. Chemical coatings are applied to the face stock to improve the appearance of the ink, create contrast within the graphic elements, or provide a protective abrasion-resistant or waterproof surface. Spot lamination can be done using matte or gloss film to highlight certain areas in the label. Overall film lamination, either in matte or gloss film, will create a label surface that is able to withstand moisture. Varnish will seal the ink on a face stock to help protect the surface from rubbing or ink offset, while UV coatings provide special visual effects in the design.

“I know that designers often think UV coatings are protective, that they work as a barrier to UV light and therefore help inks resist fading, but that’s not true,” says print management expert Marcia Mosko, president of Tobi Print Group in Los Angeles. “UV refers to the fact that these coatings are dried under UV lights. They are slightly moisture resistant, but they aren’t really considered protective coatings.”

Label carrier paper, also called backing or liner, is not ordinarily specified by designers. These stocks are selected to work with specific face stocks in pressure-sensitive labels by manufacturers. Most backing is treated with a silicone coating on the white kraft paper in order to provide easy removal of labels from the carrier. Ask your printer for samples to examine the material when creating a pressure-sensitive label.

What's right for my project?

In any design project, client and brand needs drive aesthetic solutions. Choosing the right type of label for the brand is mostly a matter of thinking through how the labeled item will be used and by whom. Walking through a day in the life of the label will tell you special materials and adhesive required.

Some basic questions to ask:

- * Product: What product will be sold or promoted?
- * Container: Is a container needed? What type of container is best? What material should it be made out of? What is its shape?
- * Environment: Will it be exposed to heat or cold? Humidity and moisture? Will grease, oil, sunlight, caustic chemicals, or other factors affect durability? Does it need to be a permanent label or removable and easily peeled off?
- * Applying the label: Will this label be affixed by machine or by hand? Of huge importance is whether or not your client will be using standing (or existing) containers or if a new package can be created. The realities of filling containers with products may well restrict design choices. It's mandatory to talk these things through up front.

Getting the best results

Getting great results with printed labels is a matter of planning and preparation. Discuss the product and the design itself with your printing supplier as early in the creative process as possible.

"Designers should meet with their printer right away. That way they can see a lot of finished samples," advises Gabriel Venegas, a customer service representative at Acme Graphic Arts Finishers in Vernon, Calif. "This is important because seeing the finished item lets you look at the way things are put together and function. It's a lot easier to talk about technical considerations when you're going over a real sample that is similar to what you're thinking about making." He suggests taking a look at standing (existing) dies, packages, and containers that your printer may already have.

After preliminary meetings, proceed with design. Once a design has been determined and the preferred product container and label materials are selected, it's a good idea to do some testing. "Designers should always ask for test labels to be included in any packaging job" says Mosko. "Blank labels cut to size on the specified stock should be supplied to the filler who will be providing the product container. That way a test can be done to make sure the label will fit the actual container before the labels are printed. "Sure, this is expensive—somewhere between \$2,000 and \$10,000—but it's worth it to not print up incorrect labels," she adds.

Good advice is priceless

Creating labels and other adhesive-based designs requires technical expertise. This is one area where designers should work closely with their printing consultants and others who are experienced with these types of projects. Despite the many factors and considerations to review, sticky stuff is potentially a powerful tool to help successfully brand your client's products and services.

Recommended resources

1,000 Bags, Tags & Labels: Distinctive Designs for Every Industry, by Kiki Eldridge, \$40, Rockport Publishers

The Power of Paper in Graphic Design, by Catharine Fishel, \$50, Rockport Publishers

Icon: Art of the Wine Label, by Jeffrey Caledewey and Chuck House, \$85, Wine Appreciation Guild

Full-Color Old-Time Label Art CD-ROM and Book, \$19.95, Dover Publications

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L. RELATED PROCEEDINGS APPENDIX

There are no related proceedings before the United States Patent and Trademark Office.

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